PERFORMANCE WORK STATEMENT for EPA REGION 7 ENVIRONMENTAL ANALYSIS & GEOGRAPHIC INFORMATION SYSTEM SUPPORT SERVICES

1.0 Background

The U.S. Environmental Protection Agency's (EPA) mission is to improve and preserve the quality of the environment through the implementation and oversight of multiple environmental programs including Air, Toxics, RCRA, Superfund, Water, Wetlands, Pesticides, Environmental Justice, Compliance Assistance, and National Environmental Policy Act reviews. The EPA's environmental responsibilities have been divided into 10 separate regions throughout the United States. EPA Region 7 covers four states including Kansas, Iowa, Missouri, and Nebraska.

Environmental analyses and geographic information systems (GIS) are used by the EPA to varying degrees in support of the national and regional environmental programs. EPA Region 7's Environmental Services Division (ENSV) is responsible for the support and coordination of all activities involving environmental analyses and GIS.

Regional environmental analyses activities include 1) risk and environmental assessment, 2) predictive and interpretive environmental modeling, 3) environmental outcome measurement, and 4) performance optimization. Specific analytical methods or technologies used to perform environmental analyses include 1) statistical models, 2) characterization (state) modeling, 3) trend analyses, 4) data integration, 5) GIS analyses, 6) remote sensing, and 7) image analyses.

GIS services are comprised of data management, application development, and coordination of GIS activities with other Federal, State, and local government agencies. EPA Region 7's GIS is comprised of the following types of spatial environmental data: 1) geo-political, 2) infrastructure, 3) cadastral/geodetic, 4) industrial, 5) pollution or stress-related, 6) biological resources, 7) physical geography, 8) water resources, 9) cultural geography, and 10) image processing. This data is stored in a classic GIS infrastructure utilizing proprietary computer hardware and software (See Appendix A).

2.0 Objective

The purpose of this contract is to provide EPA Region 7's ENSV division contractor support services for 1) environmental analyses and 2) regionally-based GIS. The specific services shall include documenting, gathering, assimilating, mapping, analyzing, processing, and administering spatial data from a multitude of Federal, State, and local agencies through the use of GIS and other analytical tools and applications. Required products shall include 1) preparation of analytical reports, 2) processing of geospatial data, 3) preparation of cartographic products, 4) preparation of models, 5) development of automated GIS applications and internet map server applications.

3.0 Technical Services Required

The types of specific services that may be ordered via task order are described below.

GIS Data Processing and Data Development

- Perform minor geo-coding using GIS tools.
- Download, via computing resources, or otherwise acquire available digital spatial data from outside sources for processing.
- Perform GIS data processing. This processing is achieved by taking acquired digital spatial data (such as DRG, DEM, NWI and Census data) and converting the data to allow input into the Region 7 GIS through an automated mechanism.
- Perform spatial data conversion, compression and projection processes on fairly large data sets (i.e. Census or satellite image data) for use in the R7 GIS.
- Digitize data from hard copy maps and process the data into the Region 7 GIS through an automated mechanism.
- Perform data entry for occasional project-specific tasks where electronic data is not available.
- Produce basic and complex (data manipulation and map) cartographic products using the R7 GIS.

Maintenance of the Region 7 GIS Data and Infrastructure

- Research information to support and supply the upkeep of metadata for the existing and acquired R7 spatial data.
- Maintain the R7 GIS project archives in digital form. The archives shall contain an index of all products. The archives should also contain the products as well as all documents that pertain to the preparation of the product.
- Provide routine maintenance of the R7 GIS metadata server.
- Provide maintenance of geospatial data residing in ESRI Spatial Database Engine (SDE).
- Process and load geospatial data into R7 SDE database.
- Provide routine maintenance of GIS-related files existing on the R7 public access and internal web-sites. Also update maintenance procedures.

GIS Project Analysis and Development of Desktop GIS Applications

All applications developed will follow a standardized application development life cycle process. The following activities may be assigned:

- Develop GIS applications for distribution on EPA Region 7's existing local network or as stand-alone applications for laptops. The contractor shall provide a fully operational application that meets Agency-approved written requirements, documentation reflecting the application system life cycle process, a report that includes source code, on-line documentation if specified, and/or a user manual providing a point of contact.

- Develop GIS analyses and major cartographic map products. These products could require significant data processing and effort.
- For each GIS data layer created/modified or database created/modified/imported, the contractor shall provide documentation describing the data elements, their meaning, their source and their validity (metadata). The contractor shall use metadata and guidelines developed by EPA.
- Develop databases with geospatial components for use by various media programs.
- Acquire, analyze, and interpret environmental data to produce 1) interpretive graphs, 2) map products, and 3) written narrative reports. These products will be used to describe the state of the environment and/or environmental trends at specific sites or in specific regions. The written reports will undergo an EPA peer review process.
- Acquire data and assist in the development of 1) ecological indicators, 2) indices and models to support ecological assessments, and 3) risk analyses and conservation targeting within the region.
- For each new analysis or project, the contractor shall provide full documentation describing the point of contact, the methodology of the analysis or project and the final project or analysis report.
- The contractor shall use documentation and guidelines developed by EPA for the production of maps and analytical reports

Development of Web-Based GIS Applications

All applications developed will follow a standardized application development life cycle process. The following activities may be assigned:

- Develop GIS web-based applications for distribution on an existing local intranet map server.
- Develop web-based forms for data entry and display.
- Develop Internet Map Server applications to display geospatial data with the capability for spatial queries by digitizing polygons, lines and points.
- Maintain and support the Access databases, FTP interfaces, and automated update and change of the contractor and the Oracle databases.
- Maintain and support all data, functions and procedures within the Oracle database, including spatial tables.
- Develop web-based reports.
- Provide user support for all modules of the application.
- Provide user and system documentation.

GIS Support for the Continuity of Operations Plan (COOP) and Regional Response Center (RRC)

Activities will be for a broad spectrum of GIS support for the COOP and RRC exercises. In the occurrence of a real emergency, the contractor will be paid overtime rates for hours over regular duty hours.

4.0 Period of Performance

The period of performance is as follows:

Base Year:	02/16/07 – 2/15/08
Option Year I*:	02/16/08 – 2/15/09
Option Year II*:	02/16/09 – 2/15/10
Option Year III*:	02/16/10 – 2/15/11

* Please refer to Section 5.0 for option year award-term incentive requirements.

5.0 Performance Incentive and Disincentive

Performance Incentive/Disincentive:

The acceptable performance standard for work requests is 90%. The performance percentage will be calculated by the COTR on a quarterly basis as follows:

The COTR will review on a quarterly basis all completed work requests and associated deliverables (not previously reviewed) for compliance with all requirements as well as completion by the assigned due date. The COTR will then calculate an observed acceptance rate (OAR) as follows:

$$\text{OAR} = \frac{\text{\# of acceptable work requests completed by due date}}{\text{\# of work requests completed}} \text{ X } 100$$

A quarterly performance score will then be assigned to each OAR that exceeds the 90% performance standard as follows:

OAR	Score
90%	0%
91%	10%
92%	20%
93%	30%
94%	40%
95%	50%
96%	60%
97%	70%
98%	80%
99%	90%
100%	100%

The maximum incentive amount that may be earned each quarter will be calculated by multiplying the fixed monthly invoice total for the quarter by 5%. The maximum incentive amount will then be multiplied by the quarterly performance score to arrive at the earned incentive. A disincentive of 5% of the fixed monthly invoice total for the quarter will be deducted for any performance score less than the 90% standard.

Award-Term Incentive:

To be eligible for award of the first option year (i.e., Option Year I), the contractor shall earn an overall OAR score of 95% or higher for the Base Year. To be eligible for award of Option Year II, the contractor must earn an overall score of 98% or higher for Option Year I. Likewise, the contractor must earn an overall score of 98% or higher for Option Year II to be eligible for the award of Option Year III.

6.0 Volume of Work

Based on previous work performed in past years and expectations of future work it is estimated that between 5,200 and 12,480 hours of work will be required each year. It is estimated that half of the activities will be associated with GIS Data Processing and Data Development and Maintenance of the Region 7 GIS Data and Infrastructure.

7.0 Personnel Qualifications

In order to successfully complete activities associated with GIS Data Processing and Data Development and Maintenance of the Region 7 GIS Data and Infrastructure, assigned personnel shall have:

- B.S. or M.S. in Geography or related field with minor coursework in cartographic and analytical techniques.
- A minimum of 1 year professional experience as a GIS specialist with ESRI's ArcGIS 9x software.
- Experience in working with GIS compatible database systems.
- Experience with plotting and printing map products using hardware and software listed in Appendix A.
- A working knowledge of Windows XP operating system.
- A working knowledge of GIS metadata methodologies.

In order to successfully complete activities associated with GIS Project Analysis and Development of Desktop GIS Applications, assigned personnel shall have:

- A minimum of 2 years of professional experience as an Analyst/Developer utilizing ESRI's ArcGIS 9x software.
- A minimum of 1 year of professional experience with ArcObjects Application Development is preferable.

In order to successfully complete activities associated with Development of Web-Based GIS Applications, assigned personnel shall have:

- A minimum of 2 years of professional experience as an Analyst/Developer utilizing ESRI's ArcGIS 9x software.

- A minimum of 2 years of professional experience developing ArcIMS applications with Dreamweaver, HTML, Java, JSP, .NET, Coldfusion or ASP.

LABOR CATEGORY DESCRIPTIONS:

Lead GIS Engineer:
Responsible for all aspects of the development and implementation of assigned projects and provides a single point of contact for those projects. Takes projects from original concept through final implementation. Defines project scope and objectives, develops detailed work plans, schedules, project estimates, resource plans, and status reports. Conducts project meetings and is responsible for project tracking and analysis. Ensures adherence to quality standards and reviews projects deliverables. Responsible for delivering some projects as well.

Qualifications:

- B.S. or M.S. in Geography or related field with minor coursework in cartographic and analytical techniques.
- A minimum of 4 years professional experience as a GIS specialist with ESRI's ArcGIs 9x software.
- Experience in working with GIS compatible database systems.
- Experience with plotting and printing map products using hardware and software listed in Appendix A.
- A minimum of 2 years of professional experience developing ARCIMS applications with Dreamweaver, HTML, JAVA, JSP, .NET, Coldfusion or ASP.
- A working knowledge of Windows XP operating system.
- A working knowledge of GIS metadata methodologies.

GIS Engineer A:
Under general direction, formulates and defines system scope and objectives. Prepares detailed specifications from which programs will be written. Designs, codes, tests, debugs, and documents those programs. Competent to work at the highest technical level of all phases of applications systems analysis and programming activities. Maybe responsible for completion of a phase of a project. Regularly provides guidance and training to less-experienced analyst/programmers.

Qualifications:

- B.S. or M.S. in Geography or related field with minor coursework in cartographic and analytical techniques.
- A minimum of 2 years professional experience as a GIS specialist with ESRI's ArcGIs 9x software.
- Experience in working with GIS compatible database systems.
- Experience with plotting and printing map products using hardware and software listed in Appendix A.
- A minimum of 2 years of professional experience developing ARCIMS applications with Dreamweaver, HTML, JAVA, JSP, .NET, Coldfusion or ASP.
- A working knowledge of Windows XP operating system.
- A working knowledge of GIS metadata methodologies.

GIS Engineer B:
Under general direction, formulates and defines system scope and objectives. Prepares detailed specifications from which programs will be written. Designs, codes, tests, debugs, and

documents those programs. Competent to work at the highest technical level of all phases of applications systems analysis and programming activities. Maybe responsible for completion of a phase of a project. Regularly provides guidance and training to less-experienced analyst/programmers.

Qualifications:

- B.S. or M.S. in Geography or related field with minor coursework in cartographic and analytical techniques.
- A minimum of 2 years professional experience as a GIS specialist with ESRI's ArcGIs 9x software.
- Experience in working with GIS compatible database systems.
- Experience with plotting and printing map products using hardware and software listed in Appendix A.
- A working knowledge of Windows XP operating system.
- A working knowledge of GIS metadata methodologies.

GIS Engineer C:

Under general supervision, formulates and defines system scope and objectives through research and fact-finding to develop or modify moderately complex information systems. Designs, codes, tests, debugs, documents, and maintains programs. Competent to work on most phases of applications systems analysis and programming activities and may require instruction and guidance in other phases.

Qualifications:

- B.S. or M.S. in Geography or related field with minor coursework in cartographic and analytical techniques.
- A minimum of 2 years professional experience as a GIS specialist with ESRI's ArcGIs 9x software.
- Experience in working with GIS compatible database systems.
- Experience with plotting and printing map products using hardware and software listed in Appendix A.
- A working knowledge of Windows XP operating system.
- A working knowledge of GIS metadata methodologies.

The contractor shall be responsible for training staff to ensure their knowledge of current technologies used to perform the work described.

8.0 Government Furnished Resources

EPA will provide office space, equipment, and computer access for on-site work performed by the contractor. An inventory of all government furnished items will be conducted at the start and again at completion of this order.

All services shall be performed at EPA Region 7, located at 901 N. 5th Street, Kansas City, KS 66101 and the Region 7 Continuity of Operations Plan Sites (COOP) unless circumstances warrant other arrangements. A standard 8 hour work day is anticipated. Work shall be performed between the hours of 6:15 a.m. and 6:15 p.m. Monday through Friday except

for legal holidays. Occasionally, estimated to be no more than 3% of the time, urgent requests for GIS services may require that hours in addition to the standard 8 hour per day schedule be worked to ensure task completion.

Agency documentation necessary for the successful completion of this contract will be available to the contractor at the place of performance. All documentation provided will remain the property of the EPA and shall not be taken off-site.

9.0 Travel

Some travel will be required in the performance of this order. Travel costs will be reimbursed on a cost incurred basis in accordance with the Joint Travel Regulations (JTR). Travel will consist of up to 20 days/year to support Regional personnel in field offices. Travel may also be necessary within the local commuting area.

10.0 Security/Privacy/Confidential Information

The required screening for contractor personnel working on this contract will be a National Agency Check with Inquiries and Credit (NACIC). Screening shall be conducted by the Office of Personnel Management (OPM). For each person screened, the COTR will send to the Personnel Security Branch (PSB) a complete security package containing the follow:

- A completed SF 85 - Questionnaire for Non-Sensitive Positions
- Two FD-258 fingerprint cards
- A Credit Release Authorization
- A funding memorandum (i.e., purchase request) covering the costs of the investigation

After PSB reviews, an individual's security package for completeness, PSB will initiate an investigation through OPM. Upon OPM's completion of the investigation, they will send an investigative report to PSB for adjudication. The CO will take appropriate action based on PSB's final adjudicative determination.

The screening may take up to six months to complete. Therefore, contractor personnel may begin work, provided their employer completes certain pre-screening requirements for contractor personnel working on the contract. Specifically, employers must furnish the CO a separate letter for each of their contractor personnel that states the following minimum pre-screening requirements have been completed:

- Check of prior employment record
- Check of references
- Verification of claimed degrees/education/military service
- Verification of signed statement that the employee has never been convicted of a felony

Information available under this contract may be protected by the provisions of the

Privacy Act of 1974; therefore, all personnel assigned to this task order will take proper precaution to protect the information from disclosure. Also, some work may be considered confidential. Therefore, signed non-disclosure statements shall be provided by the contractor for all contractor personnel working on this task order.

The contractor shall not release, nor cause to be released, to any outside party any data provided by EPA without the written consent of the Project Officer.

Contractor employees shall wear an identification badge (provided by EPA) at all times when present on-site.

Appendix A - Information Technology and Software Environment

Hardware:
Desktop Computers
HP DesignJet Plotters
HP Printers

Software:
Windows XP Workstations
ESRI ARC GIS 9.x
- ArcView 3.2
- Spatial Analyst
- 3-D Analyst
- Image Analyst

ESRI ARCSDE 9x
ESRI IMS 9x
Lotus Notes 5
Visual Basic 4x
Microsoft Office Products
Netscape
SAS

The contractor shall have experience and be proficient in the utilization of the types of hardware and software listed. This list shall be updated on a yearly basis as revisions of software become available.